

WHAT IS CLAIMED IS:

1. A recommended item presentation method, comprising the steps of:

- 5 (a) receiving access logs for viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients through a network, converting the access logs into access log maps suitable for a recommended item presentation processing, and storing the access log
10 maps;
- (b) receiving and storing item rating values indicating levels of preference of clients regarding specific items from the clients;
- (c) receiving a recommended item presentation request from
15 a client;
- (d) producing a recommended item list for the client who issued the recommended item presentation request, according to the item rating values and the access log maps for the client who issued the recommended item presentation
20 request; and
- (e) transmitting the recommended item list to the client who issued the recommended item presentation request.

2. The method of claim 1, wherein the step (a) obtains
25 each access log map as a list of item identifiers and their distances for each client identifier or a list of client identifiers and their distances for each item identifier, where a distance for each item is given by processing an information readable from each access log that contains a
30 number of accesses made to each item or date and time of a latest access to each item.

3. The method of claim 2, wherein the step (d) includes the steps of:

- 35 (d1) extracting a group of highly rated items of the

client given by a list of item identifiers of a prescribed number of items from a top in the list of item identifiers and their rating values for each client identifier or a list of item identifiers of those items for which the item rating values are greater than a prescribed value;

(d2) extracting a group of related clients given by a list of client identifiers stored in the access log map for each item identifier contained in the group of highly rated items extracted by the step (d1);

(d3) narrowing down the group of related clients extracted by the step (d2);

(d4) extracting a group of related items given by a list of item identifiers stored in the access log map for each client identifier contained in the group of related clients narrowed by the step (d3); and

(d5) obtaining the recommended item list by narrowing down the group of related items extracted by the step (d4).

4. The method of claim 3, wherein the step (d3) narrows down the group of related clients by rearranging the group of related clients in a descending order of a number of accesses with respect to the group of highly rated items extracted by the step (d1) and setting a prescribed number of clients from a top of a rearranged group of related clients as a new group of related clients, and the step (d5) narrows down the group of related items by rearranging the group of related items in a descending order of a number of accesses from the new group of related clients obtained by the step (d3) and setting a prescribed number of items from a top of a rearranged group of related items as the recommended item list.

5. A recommended item presentation method, comprising the steps of:

(a) receiving and storing access log collecting target

client data indicating those clients who are targets for collecting access logs for viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients through a network, and those
5 clients who are not targets for collecting the access logs from the item provider server;

(b) receiving the access logs for clients from the item provider server, extracting only the access logs of those clients who are targets for collecting the access logs from
10 the access logs received from the item provider server according to the access log collecting target client data stored by the step (a), converting only extracted access logs into access log maps suitable for a recommended item presentation processing, and storing the access log maps;

15 (c) receiving a recommended item presentation request from a client;

(d) producing a recommended item list for the client who issued the recommended item presentation request, according to the access log maps for the client who issued the
20 recommended item presentation request; and

(e) transmitting the recommended item list to the client who issued the recommended item presentation request.

6. The method of claim 5, wherein the step (c) receives a
25 client identifier of the client and a list of item identifiers of items accessed by the client, along with the recommended item presentation request, and the step (d) produces the recommended item list also according to the list of item identifiers received by the step (c).

30 7. The method of claim 5, further comprising the steps of:

(f) storing the access logs for those clients who are not targets for collecting the access logs, separately from the
35 access log maps for those clients who are targets for

collecting the access logs, according to the access log collecting target client data stored by the step (a);

wherein the step (d) produces the recommended item list for the client according to the the access log maps obtained from the client when the client is one of those clients who are targets for collecting the access logs, or according to the access logs for the client stored by the step (f) when the client is one of those clients who are not targets for collecting the access logs.

8. The method of claim 5, further comprising the step of:

(g) receiving and storing item rating values indicating levels of preference of the clients regarding specific items from the clients;

wherein the step (d) produces the recommended item list for the client also according to the item rating values for the client stored by the step (g).

9. The method of claim 5, wherein the step (b) obtains each access log map as a list of item identifiers and their distances for each client identifier or a list of client identifiers and their distances for each item identifier, where a distance for each item is given by processing an information readable from each access log that contains a number of accesses made to each item or date and time of a latest access to each item.

10. The method of claim 9, wherein the step (d) includes the steps of:

(d1) extracting a group of highly rated items of the client given by a list of item identifiers of a prescribed number of items from a top in the list of item identifiers and their rating values for each client identifier or a list of item identifiers of those items for which the item rating values are greater than a prescribed value;

(d2) extracting a group of related clients given by a list of client identifiers stored in the access log map for each item identifier contained in the group of highly rated items extracted by the step (d1);

5 (d3) narrowing down the group of related clients extracted by the step (d2);

(d4) extracting a group of related items given by a list of item identifiers stored in the access log map for each client identifier contained in the group of related clients
10 narrowed by the step (d3); and

(d5) obtaining the recommended item list by narrowing down the group of related items extracted by the step (d4).

11. The method of claim 10, wherein the step (d3) narrows
15 down the group of related clients by rearranging the group of related clients in a descending order of a number of accesses with respect to the group of highly rated items extracted by the step (d1) and setting a prescribed number of clients from a top of a rearranged group of related
20 clients as a new group of related clients, and the step (d5) narrows down the group of related items by rearranging the group of related items in a descending order of a number of accesses from the new group of related clients obtained by the step (d3) and setting a prescribed number
25 of items from a top of a rearranged group of related items as the recommended item list.

12. A recommended item presentation method, comprising the steps of:

30 (a) receiving access log collecting target client data indicating those clients who are targets for collecting access logs for viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients through a network, and those clients who are not
35 targets for collecting the access logs from the item

provider server, sending access log transmission requests to those clients who are targets for collecting the access logs, and sending access log transmission stopping requests to those clients who are not targets for collecting the

5 access logs;

(b) receiving the access logs from those clients who are targets for collecting the access logs, converting the access logs into access log maps suitable for a recommended item presentation processing, and storing the access log

10 maps;

(c) receiving a recommended item presentation request from a client;

(d) producing a recommended item list for the client who issued the recommended item presentation request, according to the access log maps for the client who issued the recommended item presentation request; and

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(e) transmitting the recommended item list to the client who issued the recommended item presentation request.

20 13. The method of claim 12, further comprising the step of:

(f) receiving and recording a list of item identifiers of items to be delivered from the item provider server, along with an item delivery request.

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14. The method of claim 12, further comprising the steps of:

(g) incrementing a received log count of each client when an access log is received from each client; and

30 (h) regularly counting the received log count of each client and transmitting a counted received log count of each client to the item provider server.

15. The method of claim 14, further comprising the step
35 of:

(i) paying a log providing fee from the item provider server to each client who provided the access logs according to the received log count of each client transmitted at the step (h).

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16. The method of claim 12, wherein the step (b) obtains each access log map as a list of item identifiers and their distances for each client identifier or a list of client identifiers and their distances for each item identifier,
10 where a distance for each item is given by processing an information readable from each access log that contains a number of accesses made to each item or date and time of a latest access to each item.

15 17. The method of claim 12, wherein the step (c) receives a client identifier of the client and a list of item identifiers of items accessed by the client, along with the recommended item presentation request, and the step (d) produces the recommended item list also according to the
20 list of item identifiers received by the step (c).

18. The method of claim 17, wherein the step (d) includes the steps of:

(d1) extracting a group of related clients given by a list
25 of client identifiers of those clients who are accessing each item whose item identifier is contained in the list of item identifiers received by the step (c), according to the access log maps stored by the step (b);

(d2) narrowing down the group of related clients extracted
30 by the step (d1);

(d3) extracting a group of related items given by a list of item identifiers of items accessed by each client whose client identifier is contained in the group of related clients narrowed by the step (d2), according to the access
35 log maps stored by the step (b); and

(d4) obtaining the recommended item list by narrowing down the group of related items extracted by the step (d3).

19. The method of claim 18, wherein the step (d2) narrows
5 down the group of related clients by rearranging a group of related clients in a descending order of a number of accesses with respect to items whose item identifiers are contained in the list of item identifiers received by the step (c) and setting a prescribed number of clients from a
10 top of a rearranged group of related clients as a new group of related clients, and the step (d4) narrows down the group of related items by rearranging the group of related items in a descending order of a number of accesses from the new group of related clients obtained by the step (d2)
15 and setting a prescribed number of items from a top of a rearranged group of related items as the recommended item list.

20. The method of claim 18, wherein the step (d2) narrows
20 down the group of related clients by rearranging a group of related clients in a descending order of a number of accesses with respect to items whose item identifiers are contained in the list of item identifiers received by the step (c) and setting a prescribed number of clients from a
25 top of a rearranged group of related clients as a new group of related clients, and the step (d4) narrows down the group of related items by rearranging a group of items contained in the recommended item list in a descending order of a number of accesses from the new group of related
30 clients obtained by the step (d2) and setting a prescribed number of items from a top of a rearranged group of items as a new recommended item list.

21. A recommended item presentation device, comprising:
35 a first unit configured to receive access logs for

viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients through a network, convert the access logs into access log maps suitable for a recommended item presentation processing, and store the access log maps;

a second unit configured to receive and store item rating values indicating levels of preference of clients regarding specific items from the clients;

a third unit configured to receive a recommended item presentation request from a client;

a fourth unit configured to produce a recommended item list for the client who issued the recommended item presentation request, according to the item rating values and the access log maps for the client who issued the recommended item presentation request; and

a fifth unit configured to transmit the recommended item list to the client who issued the recommended item presentation request.

22. The device of claim 21, wherein the first unit obtains each access log map as a list of item identifiers and their distances for each client identifier or a list of client identifiers and their distances for each item identifier, where a distance for each item is given by processing an information readable from each access log that contains a number of accesses made to each item or date and time of a latest access to each item.

23. The device of claim 22, wherein the fourth unit extracts a group of highly rated items of the client given by a list of item identifiers of a prescribed number of items from a top in the list of item identifiers and their rating values for each client identifier or a list of item identifiers of those items for which the item rating values are greater than a prescribed value; extracts a group of

related clients given by a list of client identifiers stored in the access log map for each item identifier contained in the group of highly rated items as extracted; narrows down the group of related clients as extracted;

5 extracts a group of related items given by a list of item identifiers stored in the access log map for each client identifier contained in the group of related clients as narrowed; and obtains the recommended item list by narrowing down the group of related items as extracted.

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24. The device of claim 23, wherein fourth unit narrows down the group of related clients by rearranging the group of related clients in a descending order of a number of accesses with respect to the group of highly rated items as
15 extracted and setting a prescribed number of clients from a top of a rearranged group of related clients as a new group of related clients, and narrows down the group of related items by rearranging the group of related items in a descending order of a number of accesses from the new group
20 of related clients as obtained and setting a prescribed number of items from a top of a rearranged group of related items as the recommended item list.

25. A recommended item presentation device, comprising:

25 a first unit configured to receive and store access log collecting target client data indicating those clients who are targets for collecting access logs for viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients
30 through a network, and those clients who are not targets for collecting the access logs from the item provider server;

a second unit configured to receive the access logs for clients from the item provider server, extracting only
35 the access logs of those clients who are targets for

collecting the access logs from the access logs received
from the item provider server according to the access log
collecting target client data stored by the first unit,
convert only extracted access logs into access log maps
5 suitable for a recommended item presentation processing,
and store the access log maps;

a third unit configured to receive a recommended item
presentation request from a client;

a fourth unit configured to produce a recommended item
10 list for the client who issued the recommended item
presentation request, according to the access log maps for
the client who issued the recommended item presentation
request; and

a fifth unit configured to transmit the recommended
15 item list to the client who issued the recommended item
presentation request.

26. The device of claim 25, wherein the third unit
receives a client identifier of the client and a list of
20 item identifiers of items accessed by the client, along
with the recommended item presentation request, and the
fourth unit produces the recommended item list also
according to the list of item identifiers received by the
third unit.

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27. The device of claim 25, further comprising:

a sixth unit configured to store the access logs for
those clients who are not targets for collecting the access
logs, separately from the access log maps for those clients
30 who are targets for collecting the access logs, according
to the access log collecting target client data stored by
the first unit;

wherein the fourth unit produces the recommended item
list for the client according to the the access log maps
35 obtained from the client when the client is one of those

clients who are targets for collecting the access logs, or according to the access logs for the client stored by the sixth unit when the client is one of those clients who are not targets for collecting the access logs.

28. The device of claim 25, further comprising:

a sixth unit configured to receive and store item rating values indicating levels of preference of the clients regarding specific items from the clients;

wherein the fourth unit produces the recommended item list for the client also according to the item rating values for the client stored by the sixth unit.

29. The device of claim 25, wherein the second unit obtains each access log map as a list of item identifiers and their distances for each client identifier or a list of client identifiers and their distances for each item identifier, where a distance for each item is given by processing an information readable from each access log that contains a number of accesses made to each item or date and time of a latest access to each item.

30. The device of claim 29, wherein the fourth unit extracts a group of highly rated items of the client given by a list of item identifiers of a prescribed number of items from a top in the list of item identifiers and their rating values for each client identifier or a list of item identifiers of those items for which the item rating values are greater than a prescribed value; extracts a group of related clients given by a list of client identifiers stored in the access log map for each item identifier contained in the group of highly rated items as extracted; narrows down the group of related clients as extracted; extracts a group of related items given by a list of item identifiers stored in the access log map for each client

identifier contained in the group of related clients as narrowed; and obtains the recommended item list by narrowing down the group of related items as extracted.

5 31. The device of claim 30, wherein the fourth unit
narrows down the group of related clients by rearranging
the group of related clients in a descending order of a
number of accesses with respect to the group of highly
rated items as extracted and setting a prescribed number of
10 clients from a top of a rearranged group of related clients
as a new group of related clients, and narrows down the
group of related items by rearranging the group of related
items in a descending order of a number of accesses from
the new group of related clients as obtained and setting a
15 prescribed number of items from a top of a rearranged group
of related items as the recommended item list.

32. A recommended item presentation device, comprising:
a first unit configured to receive access log
20 collecting target client data indicating those clients who
are targets for collecting access logs for
viewing/purchasing items by clients from an item provider
server which provides items to a plurality of clients
through a network, and those clients who are not targets
25 for collecting the access logs from the item provider
server, send access log transmission requests to those
clients who are targets for collecting the access logs, and
send access log transmission stopping requests to those
clients who are not targets for collecting the access logs;
30 a second unit configured to receive the access logs
from those clients who are targets for collecting the
access logs, convert the access logs into access log maps
suitable for a recommended item presentation processing,
and store the access log maps;
35 a third unit configured to receive a recommended item

presentation request from a client;

a fourth unit configured to produce a recommended item list for the client who issued the recommended item presentation request, according to the access log maps for the client who issued the recommended item presentation request; and

a fifth unit configured to transmit the recommended item list to the client who issued the recommended item presentation request.

33. The device of claim 32, further comprising:

a sixth unit configured to receive and record a list of item identifiers of items to be delivered from the item provider server, along with an item delivery request.

34. The device of claim 32, further comprising:

a sixth unit configured to increment a received log count of each client when an access log is received from each client; and

a seventh unit configured to regularly count the received log count of each client and transmit a counted received log count of each client to the item provider server.

35. The device of claim 32, wherein the second unit obtains each access log map as a list of item identifiers and their distances for each client identifier or a list of client identifiers and their distances for each item identifier, where a distance for each item is given by processing an information readable from each access log that contains a number of accesses made to each item or date and time of a latest access to each item.

36. The device of claim 32, wherein the third unit

receives a client identifier of the client and a list of

item identifiers of items accessed by the client, along with the recommended item presentation request, and the fourth unit produces the recommended item list also according to the list of item identifiers received by the
5 third unit.

37. The device of claim 36, wherein the fourth unit extracts a group of related clients given by a list of client identifiers of those clients who are accessing each
10 item whose item identifier is contained in the list of item identifiers received by the third unit, according to the access log maps stored by the second unit; narrows down the group of related clients as extracted; extracts a group of related items given by a list of item identifiers of items
15 accessed by each client whose client identifier is contained in the group of related clients as narrowed, according to the access log maps stored by the second unit; and obtains the recommended item list by narrowing down the group of related items as extracted.

20 38. The device of claim 37, wherein the fourth unit narrows down the group of related clients by rearranging a group of related clients in a descending order of a number of accesses with respect to items whose item identifiers
25 are contained in the list of item identifiers received by the third unit and setting a prescribed number of clients from a top of a rearranged group of related clients as a new group of related clients, and narrows down the group of related items by rearranging the group of related items in
30 a descending order of a number of accesses from the new group of related clients as obtained and setting a prescribed number of items from a top of a rearranged group of related items as the recommended item list.

35 39. The device of claim 37, wherein the fourth unit

narrows down the group of related clients by rearranging a group of related clients in a descending order of a number of accesses with respect to items whose item identifiers are contained in the list of item identifiers received by
5 the third unit and setting a prescribed number of clients from a top of a rearranged group of related clients as a new group of related clients, and narrows down the group of related items by rearranging a group of items contained in the recommended item list in a descending order of a number
10 of accesses from the new group of related clients as obtained and setting a prescribed number of items from a top of a rearranged group of items as a new recommended item list.

15 40. A computer usable medium having computer readable program codes embodied therein for causing a computer to function as a recommended item presentation device, the computer readable program codes include:

a first computer readable program code for causing
20 said computer to receive access logs for viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients through a network, convert the access logs into access log maps suitable for a recommended item presentation processing, and store the
25 access log maps;

a second computer readable program code for causing said computer to receive and store item rating values indicating levels of preference of clients regarding specific items from the clients;

30 a third computer readable program code for causing said computer to receive a recommended item presentation request from a client;

a fourth computer readable program code for causing said computer to produce a recommended item list for the
35 client who issued the recommended item presentation

request, according to the item rating values and the access log maps for the client who issued the recommended item presentation request; and

5 a fifth computer readable program code for causing said computer to transmit the recommended item list to the client who issued the recommended item presentation request.

41. A computer usable medium having computer readable
10 program codes embodied therein for causing a computer to function as a recommended item presentation device, the computer readable program codes include:

a first computer readable program code for causing
said computer to receive and store access log collecting
15 target client data indicating those clients who are targets for collecting access logs for viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients through a network, and those clients who are not targets for collecting the access logs
20 from the item provider server;

a second computer readable program code for causing
said computer to receive the access logs for clients from the item provider server, extracting only the access logs of those clients who are targets for collecting the access
25 logs from the access logs received from the item provider server according to the access log collecting target client data stored by the first computer readable program code, convert only extracted access logs into access log maps suitable for a recommended item presentation processing,
30 and store the access log maps;

a third computer readable program code for causing said computer to receive a recommended item presentation request from a client;

a fourth computer readable program code for causing
35 said computer to produce a recommended item list for the

client who issued the recommended item presentation request, according to the access log maps for the client who issued the recommended item presentation request; and

5 a fifth computer readable program code for causing said computer to transmit the recommended item list to the client who issued the recommended item presentation request.

42. A computer usable medium having computer readable program codes embodied therein for causing a computer to function as a recommended item presentation device, the computer readable program codes include:

10 a first computer readable program code for causing said computer to receive access log collecting target client data indicating those clients who are targets for collecting access logs for viewing/purchasing items by clients from an item provider server which provides items to a plurality of clients through a network, and those clients who are not targets for collecting the access logs from the item provider server, send access log transmission requests to those clients who are targets for collecting the access logs, and send access log transmission stopping requests to those clients who are not targets for collecting the access logs;

20 a second computer readable program code for causing said computer to receive the access logs from those clients who are targets for collecting the access logs, convert the access logs into access log maps suitable for a recommended item presentation processing, and store the access log maps;

30 a third computer readable program code for causing said computer to receive a recommended item presentation request from a client;

a fourth computer readable program code for causing said computer to produce a recommended item list for the

client who issued the recommended item presentation request, according to the access log maps for the client who issued the recommended item presentation request; and

5 a fifth computer readable program code for causing said computer to transmit the recommended item list to the client who issued the recommended item presentation request.

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